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TRANSMISSION SYSTEM ENGINEERING

BACKGROUND

Without a complete description of the proposed transmission interconnection staff will be unable to determine whether or not the proposed project would have a significant impact on the environment. While the proposed interconnection is adjacent to the proposed project site, the application did not include a detailed description and/or electrical diagram of the interconnecting facilities for the new generator. A discussion of new interconnection facilities and whether the interconnection will require an expansion of the existing El Centro switching station would allow for the analysis of the potential impacts of the proposed project.

DATA REQUEST

12. Please provide a complete electrical diagram of the interconnecting facilities between the new generator and El Centro switching station showing all equipment including bus duct connectors, the 15 kV switchgear, the breakers, the disconnect switches, the generator step-up (GSU) transformer, the 92 kV transmission line as well as its termination breakers and their respective ratings.

    a. Please provide an electrical one line diagram of the El Centro switching station showing the arrangement of buses, the breakers, the existing generators with their ratings, all the transmission lines and the step-up transformers.

        i. Should an expansion of the El Centro switching station be required to accommodate the new generating unit, please provide a description and the necessary drawings of the expansion in the electrical one line diagram.

DATA RESPONSE

Attachment A, Electrical Key One Line Diagram E1-1, shows the proposed electrical connection from the generator to the new 92-kV breaker located at the high side of the GSU. Attachment B, Electrical Key One Line Diagram E1-2, shows the connection from this high side breaker to the El Centro Switching Station.

The generator breaker is supplied by GE with the 7EA Package and it is rated at 15 kV, 5000 A, 1500 MVA. GE also supplies 15 kV, 5000 A, 100 kA rms Asym. non-segregated phase bus duct that connects the generator to the generator

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breaker. The EPC Contractor will supply non-segregated phase bus duct to connect the generator breaker to the GSU.

The GSU is rated at 100/133 MVA, OA/FA, 92-13.8 kV, Z~12.18% on 100 MVA base.

The 92-kV GSU circuit breaker is rated at 115 kV, 1200 A, and 63 kA.

The three single-phase potential transformers located on the 92 kV side of the GSU are rated at 55.2 kV-115/69V with a 800/480:1 ratio.

The interconnection proceeds west from the high side of the GSU via an A-frame structure, then north around an existing maintenance building, then east within the north boundary of the ECGS Site, then south to the existing El Centro Switching Station. Two existing 161 kV wood line poles that are currently close to the proposed path will be replaced and re-located to maintain clearances.

The interconnection will terminate at a spare position in the El Centro Switching Station double-breaker, double-bus structure east of the existing CTG position 2-2. This span between the GSU and El Centro Switching Station will be strung with 795 kcmil AAC and will be mounted on IID standard steel poles. Attachment C, El Centro Switching Station One Line Drawing, is attached to this data response. No additional expansion of the station is required for the termination of the Project.

ATTACHMENT A
TRANSMISSION SYSTEM ENGINEERING
ELECTRICAL KEY ONE LINE DIAGRAM E1-1

ATTACHMENT B
TRANSMISSION SYSTEM ENGINEERING
ELECTRICAL KEY ONE LINE DIAGRAM E1-2

ATTACHMENT C
TRANSMISSION SYSTEM ENGINEERING
EL CENTRO SWITCHING STATION ONE LINE DRAWING